THE MENDOTA GROUP, LLC
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Energy Conservation and Optimization Act Implementation Process

Efficient Fuel-Switching Guidelines Working Group

November 23, 2021

Agenda

1:00 p.m.	Welcome and Introductions
1:10 p.m.	Efficient Fuel-Switching Guidelines Context and Resources
1:25 p.m.	EFS Guidelines – Discussion
2:00 p.m.	Break
2:10 p.m.	Guidelines Development Process
2:40 p.m.	Next Steps
3:00 p.m.	Adjourn

Meeting Information

- All participants can speak, use video, and chat.
- Questions and observations can be placed in the chat.
  - Chat works fine; if you'd like to share thoughts verbally, please raise your hand and then you can unmute and speak.
- We are taking notes and will share the notes with participants after the meeting.
- We will be recording this meeting but only to check our notes.
- We encourage participants to: actively participate, be positive and constructive, and open to different perspectives.

Introductions

Organizations Registered		
Applied Energy Group (MERC)	GDS Associates	MN Dept. of Commerce
Cadmus	Great River Energy	Otter Tail Power
CEE	ICF	Owatonna Public Utilities
CenterPoint Energy	Joint	Slipstream
City of Minneapolis	Lake Country Power	Southern Minnesota Municipal Power Agency (SMMPA)
Connexus Energy	Michaels Energy	Stearns Electric Association
Dakota Electric	Midwest Energy Efficiency Alliance (MEEA)	The Mendota Group, LLC
Electrical Association	MN Municipal Utilities Assoc. (MMUA)	Willdan
Elk River Municipal Utilities	Minnesota Power	Wright-Hennepin Cooperative Electric Association
Energy Resources Center – Univ. of Illinois, Chicago	Minnesota Rural Electric Association (MREA)	Xcel Energy
Franklin Energy	Minnkota Power Cooperative	
Fresh Energy	Missouri River Energy Services	

Efficient Fuel-Switching Guidelines Context

High-Level Description

- The Efficient Fuel-Switching aspects of of the ECO Act are one of the most expansive aspects of the Act.
- The law eliminates the fuel-switching prohibition in CIP, and authorizes (through CIP) the following:
  - Electric IOUs can promote electric measures that replace measures powered by natural gas, propane, or any of the other listed fuels.
  - Natural gas IOUs can promote electric measures that replace natural gas measures.
  - Electric consumer-owned utilities can promote electric measures that replace measures powered by natural gas, propane, or any of the other listed fuels.

Efficient Fuel-Switching Guidelines Context

Statutory Language (excerpt)

Definitions

216B.2402, Subd. 4. ***"Efficient fuel-switching improvement"*** *means a project that:*

(1) replaces a fuel used by a customer with electricity or natural gas delivered at retail by a utility subject to section 216B.2403 or 216B.241;

(2) results in a net increase in the use of electricity or natural gas and a net decrease in source energy consumption on a fuel-neutral basis;

(3) otherwise meets the criteria established for consumer-owned utilities in section 216B.2403, subdivision 8, and for public utilities under section 216B.241, subdivisions 11 and 12; and

(4) requires the installation of equipment that utilizes electricity or natural gas, resulting in a reduction or elimination of the previous fuel used.

An ***efficient fuel-switching improvement*** *is not an energy conservation improvement or energy efficiency even if the* ***efficient fuel-switching improvement*** *results in a net reduction in electricity or natural gas use. An* ***efficient fuel-switching improvement*** *does not include, and must not count toward any energy savings goal from, energy conservation improvements when fuel switching would result in an increase of greenhouse gas emissions into the atmosphere on an annual basis.*

Subd. 8. ***Fuel.*** *"Fuel" means energy, including electricity, propane, natural gas, heating oil, gasoline, diesel fuel, or steam, consumed by a retail utility customer.*

Efficient Fuel-Switching Guidelines

Resources

- The Working Group will develop materials to send to the Department of Commerce for consideration in crafting proposed guidelines that can be reviewed by the public and considered by the DOC Deputy Commissioner for adoption.
- Working Group members are encouraged to upload to the site other information that can help inform the Working Group's efforts.
- For those interested in learning more about the process can review information from a similar DOC proceeding, related to utilities including Electric Utility Infrastructure (EUI) projects in their CIPs.
  - This info is in the Resources folder on the ECO Act Coordinating Committee SharePoint.

Efficient Fuel-Switching Guidelines Working Group Timeline

Reminder

- The EFS Guidelines Working Group has a tight timeline – for the Deputy Commissioner to issue a Decision by **3/15/22**, this group will need to submit draft advisory language to Department by mid to late January 2022.
- We will have meetings to follow this meeting, although much work can be done online (and we encourage this).

Efficient Fuel-Switching Guidelines – Comments and Discussion

Comments Received from Eight Groups

45 Total Questions / Comments in Tracker

- We categorized items, mostly to better understand the types of questions / observations we had.
- The largest category is “Definitions” but there were a number of comments about ”Technical” aspects including cost-effectiveness, and energy and GHG savings.
- Underscores the challenges of answering all questions – which will be unable to do through this group.
- Determine what is clearly permissible, what we can clarify and what will need to handled post March 15, 2022.

Comments Side-by-Side

Mostly Responses to Own Questions

Category - Primary	Question/Observation	MERC	CEE	Minnesota Power	Xcel Energy	Energy Center - University of Illinois Chicago	CenterPoint
Definitions	Can a natural gas utility implement a fuel-switching improvement from electric (or any other fuel) to natural gas?	We recommend broadening this question to inquire about any limitations or restrictions to the EFS baseline when switching to natural gas. For example, can a natural gas utility implement a switch from other fuels to natural gas?				The ERC would also ask whether an electric utility could implement a fuel switching improvement from electric to natural gas. In Illinois, both electric and gas utilities are able to incentivize and claim savings from fuel switching CHP system, provided that they meet energy savings thresholds.	
Definitions	Does ECO language forbid electric utilities from incentivizing natural gas switching measures if they reduce electric source energy? (E.G. gas fired CHP?						
Technical - GHG Calculations	What greenhouse gas emissions calculations should be used for each utility?	The statutes appear to require that electric utilities measure EFS emissions reductions based on the hourly emissions of the utility.	Our existing modeling has shown that fuel-switching outcomes are sensitive to methodological details, particularly with respect to source and emissions tests. There are several methodological details to consider by the working group. Some of these are presented at a high level below: **Source and emissions methodologies should be linked** Methodologies for calculating source energy and emissions should be explicitly linked. Electricity supply changes that reduce emissions also increase source efficiency. In general, source energy tests are more difficult to pass than emissions tests; however, the quantity of emissions savings is the more important driving factor from an environmental accounting / justification perspective. So both tests should rely on a consistent set of assumptions and calculation framework such that these values move in tandem for 1) a specific utility's supply forecast and 2) a specific fuel-switching measure. In practice, this means source energy tests should use hourly estimates over the full measure lifetime based on forecasted supply side changes.			ERC-UIC advocates using a marginal heat rate and emissions rate when assessing fuel switching applications; instead of an average rate. Marginal resources are the generation that is scaled back or avoided when grid demand is reduced, and marginal emission factors are typically different from average emissions factors in that they directly reflect the energy and emissions factors of units that will be curtailed. For example, marginal factors that consider the operating margin normally exclude wind and solar generation as the electricity these resources generate is typically not affected by any short-term intervention (with the exception of curtailment events). However, average emission factors include all wind and solar production and "must run" baseload resources such as nuclear generation that operate constantly. When calculating source electric savings it is necessary to include transmission and distribution (T&D) line losses as well.	Given that electric generation has a utility-specific efficiency and contributes to carbon dioxide emissions, how will guidelines address this given this utility variation in full fuel cycle (source) for evaluating if a fuel switching measure saves energy, save money, and reduce emissions?

What We Know

Eligible scenarios and projects based on statute

- Electric utilities (IOUs and COUs) can promote projects that switch fuel use from natural gas (and delivered fuels) to electricity.
- Natural gas utilities (IOUs) can promote projects that switch fuel use from natural gas to electricity.
- All projects need to meet the four-part test (IOUs from 216B.241, subd. 12 and COUs from 216B.2403, subd. 8).

What We Don't Know

Utility project eligibility scenarios that need to be explored

- Can electric utilities (IOUs and COUs) promote projects that switch fuel use from electricity to natural gas?
- Can natural gas COUs promote projects that switch fuel use from natural gas to electricity?
- Can natural gas utilities (IOUs) promote projects that switch fuel use from electricity and delivered fuels to natural gas?
- Can utilities implement projects that reduce fuel use other than the one they sell (e.g., natural gas IOU promoting lighting program)?
- Others?

Issues Applicable to Projects

Identify those applicable to all versus those applicable to specific

- Applicable to all:
  - Estimates of utility-specific GHGs.
  - Guidelines for estimating EFS project cost-effectiveness.
  - Guidelines for estimating EFS project energy savings.
- Applicable to specific situations.
  - What types of projects will be eligible (new construction)?
  - What baselines to apply for measures not previously rebated (e.g., EVs)?
  - What differs between COUs and IOUs in terms of projects that will qualify?

Goals

Will further categorize items in terms of whether guidance will address

Groupings

- Those that should/must be answered by DOC guidance.
- Those that would be good to answer in guidance.
- Those that cannot be answered in guidance and we'll tee-up for longer-term consideration.

Prioritize

- These will dictate priorities in terms of what can be accomplished by mid to late-January to send to DOC.

10-Minute Break

Back at: 2:15 CST

Guidelines Development

Input from Working Group

Timeline

- Request that Stakeholders provide listing of specific scenarios, whether organization thinks they qualify, and the reasoning for why it qualifies (as well as questions you may have).
- Provide this by December 1 through memos.
- We will then combine this information into the list of eligible/ineligible utility scenarios in time for a December 8 target meeting.
- For Dec. 8 meeting, will have more clearly defined eligibility items and draft guidance, along with additional questions (technical and otherwise) that will need to be addressed.

Next Steps

Next Steps

- Working Group members review comments in ECO Act Implementation Issues Tracker (Efficient FS WG tab and EFS Side-by-Side) and add items and comments as you see fit.
- Members will draft memos with any additional utility eligibility questions and answer those that have already been identified:
  - Can electric utilities (IOUs and COUs) promote projects that switch fuel use from electricity to natural gas?
  - Can natural gas COUs promote projects that switch fuel use from natural gas to electricity?
  - Can utilities implement projects that reduce fuel use other than the one they sell (e.g., natural gas IOU promoting lighting program)?

The End (of this presentation)

- Thank you for your participation and contributions to this effort.
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